monly. The lesser sac is a rare site of spontaneous hemorrhage even in patients with bleeding diathesis; only a single case of isolated lesser sac hemorrhage has been reported in a hemophilia patient. We report a similar case with no history of trauma. He recovered with administration of factor VIII concentrate. [Indian J Gastroenterol 1999;18:38-39]

Key words: Bleeding disorder

Hemophilia is a heterogeneous disorder resulting from mutation in the factor VIII gene, leading to reduction in factor VIII activity. Soft tissue hematomas and hemarthroses are characteristic of this disorder.

A 10-year-old boy, a known case of severe hemophilia (factor VIIIc less than 1%) on factor VIII replacement treatment, presented with non-colicky left hypochondriac pain since two days. There was no history of antecedent trauma. Clinical examination and laboratory investigations were unremarkable. CT scan of the abdomen revealed a high-density lesser sac fluid collection (60 Hounsfield units) suggestive of blood. The collection showed peripheral contrast enhancement (Fig). He was treated with parenteral administration of factor VIII concentrates, and was discharged in a stable condition after one week.

Hemophilic patients may bleed into various structures, sometimes due to trivial or imperceptible trauma. Hemarthrosis is the most frequent, painful manifestation of hemophilia.1 Other common sites of hemorrhage include the subcutaneous tissues, fascia and muscles. The lesser sac is an exceptional site for hemorrhage; Chambers et al reported a case of spontaneous isolated hematoma in the lesser sac of a patient with hemophilia.

The lesser peritoneal sac is usually not well distinguished except when an abnormality such as fluid collection, mass (pseudocyst, neoplasm) or even internal herniation of the gall bladder or intestine, delineates its borders and displaces neighboring organs. Some causes of blood in the lesser sac include hemorrhagic pancreatitis, hepatic or splenic laceration, bleeding from a neoplasm and hemorrhage from a splenic artery aneurysm.1

Adelman et al reported a patient with hemophilia who developed intra-mesenteric hematoma following a large meal. They suggested that overdistension of the stomach probably caused tearing of the small blood vessels of the lesser omentum leading to tracking of blood into the greater omentum. As there was no obvious trauma in our patient and no other site of bleeding, we presume that a similar phenomenon might have led to spontaneous lesser sac hemorrhage in our patient.

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Segment IV liver cyst with biliary communication following laparoscopic deroofing

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Simple cysts of the liver rarely have a biliary communication. We record the development of a biliary communication following laparoscopic deroofing of a segment IV simple cyst of liver and document its successful sclerosis with tetracycline. [Indian J Gastroenterol1999;18:39-40]

Key words: Non parasitic liver cyst, biliary fistula

The various treatment modalities for symptomatic non parasitic cysts of liver include open surgical fenestration, total excision and intracystic sclerosant injection.1,2 Laparoscopic deroofing is also now described as successful treatment for simple liver cysts.3

Factors predicting recurrence following treatment include deep-seated cysts, incomplete deroofing, and right posterior segment location in the liver.4 Segment IV cysts, due to their central location and proximity to vascular and biliary structures, are also known to present difficulties in

Fig: Contrast-enhanced CT scan of abdomen showing peripheral rim enhancement of fluid collection
management. We report a woman with a symptomatic simple cyst in segment IV area of the liver, who developed recurrence with major biliary communication following laparoscopic deroofing and had a spontaneous closure.

A 38-year-old woman presented with right upper quadrant pain and abdominal distension of 7 months’ duration. She gave no history of cholangitis or jaundice. Examination revealed hepatomegaly. Liver function tests were normal. CT scan showed a low-attenuating lesion (11 cm x 9 cm x 9.5 cm) in the segment IV area of the liver. Hydatid disease was ruled out by serology. At laparoscopy, a large, thin-walled cyst of the liver, extending from the gall bladder to the ligamentum teres, was found. The wall was partly excised creating a large fenestration (6 cm x 4 cm) in the inferior aspect of the cyst. The contents of the cyst were clear; the interior of the cyst was smooth walled with no evidence of bile leakage. The gall bladder was retained as it was not part of the cyst wall. The immediate postoperative period was uneventful and the patient was discharged on the third postoperative day.

She returned a week later with high-grade fever. Ultrasonography showed a recurrence of the cyst, in size similar to the preoperative status. In addition, there was fluid in the pelvis. Aspiration of the fluid showed it to be infected bile. Pigtail catheter drainage of the cyst was done and 200 mL of turbid bile-stained fluid was obtained. The fluid cultured staphylococci and the patient improved with the drainage and antibiotics.

The external biliary fistula persisted with a daily output of about 150 mL to 200 mL. ERCP showed evidence of leak into the cyst from the right hepatic duct (Fig.). Sphincterotomy was not performed due to technical difficulties. The fistula decreased gradually over one month and became colorless, indicating closure of the biliary communication. This was confirmed with a caviogram performed via the pigtail catheter.

Subsequently, sclerosis of the cyst was performed using 1 g of oxytetracycline diluted in 100 mL of normal saline and infused into the cyst via the catheter; the contact time was 30 min. The procedure was repeated twice at weekly intervals. The cyst reduced to less than 2 cm and the catheter was removed.

The patient has remained asymptomatic with normal liver functions. The cyst has not recurred during follow-up of 18 months.

The response of liver cysts to intervention may depend to some extent on the location. Intervention in cysts located in segment IV of the liver has been described to be complicated by intraoperative major bile duct injury, postoperative infection and necrosis of omental pedicle used to obliterate the cavity. The problems associated with segment IV location are proximity to the hepatic artery, portal vein bifurcation and the major bile ducts, thus making total excision hazardous. The cyst may also have a tendency to collapse on itself after decompression, thus occluding the surgically designed opening. The mechanism of development of cyst-biliary communication could be constant pressure of the cyst on biliary radicals causing thinning and rupture of the ductal wall. In the patient reported here, it is likely that the weakened area gave way after the laparoscopic deroofing.

Cysts with biliary communication generally need closure of the bile duct opening at laparotomy or, if this is not possible, cystoenterostomy. However, in our patient, the cyst-biliary communication sealed spontaneously even though it was to a major duct. The cyst was then sclerosed with tetracycline; this is, to our knowledge, the first reported use of this drug for sclerosis of simple cyst of the liver. A recent report has documented the use of minocycline, a tetracycline derivative, for the same purpose.

In summary, segment IV cysts are likely to be associated with a higher incidence of major biliary communication. This report highlights the fact that a biliary fistula may occur after surgical intervention. We wish to record the unique occurrence of spontaneous closure of major cyst-biliary communication.

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Fig: ERCP showing extravasation of contrast from right hepatic duct

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